1. Census or Sample? Explain.

1. To find the favourite TV show of Grade 8 students in the school, fifteen of the 40 grade 8 students in the school are surveyed.

SAMPLE because it is not all of them!

1. To find the favourite video game of Ontario 13-year-olds, all 13-year-old students in Ontario are surveyed.

Census, because of all, but sample can be explained if you stated that it was because not all 13 year olds are in school!

1. To find out if customers of a chain of coffee shops are happy with the service, some of the customers in every shop were surveyed.

Sample! Because not EVERY customer was asked….

2. For each survey, state if the sample is biased or reliable.

Justify your answer.

a) To find out if the arena should offer more public skating times, a survey is posted on a bulletin board at the arena and left for patrons to complete and return. Biased because it is only available to people at the arena.

b)to find out the favourite breakfast of Grades 7 and 8 students, a survey of 300 randomly -selected Grades 7 and 8 students was conducted. Reliable, any and all segments of the groups would be represented because of the RANDOM choice

c)TO find out about the exercise habits of Canadian teenagers, a fitness magazine asks its readers to send in information about the exercise habits of teenagers. Biased, because only the readers of the magazine have a say, AND those readers are probably NOT representative of the average population…

d) To find out if the soccer league should buy new uniforms for the players, 20 parents of the students in the soccer league were surveyed. Biased, because just parents were asked, not the kids…

3. For each situation, explain why data are collected from a sample and not a census.

a) To find the mean cost of hockey equipment for teenagers in Canada – SAMPLE because it only makes sense to ask hockey players, as the others pay nothing.

b) To find the number of Canadian families with a cell phone – Cost too much time and effort to ask everyone, sample would do the job…

c) To find the number of hours a AAA battery will last in a calculator – If I tested them all they would all be dead….

4. For each situation below

a) Might the sampling method provide biased data?

b)If yes, how can the sampling method be changed so that the data collected represents the population

* The student council wants to know if the students will attend another school dance this month

The student council members survey all their friends to find out – biased because they are only telling their friends - they should take a random sample students….

* A sportswear store conducts a survey to find the most popular brands of athletic shoes

The first 300 people in the store who are wearing athletic shoes are surveyed. Biased, against people who are not wearing their athletic shoes AT THAT TIME…. Change to first 300, ASK people if they have a preference….

* To find out the number of hours per week that people in her city spend exercising, a newspaper journalist interviews all the clients at 5 different fitness centres in the city.

BIASED! The figure does not account for people who don’t exercise in gyms, or at all….

Door to door, Newspaper ad, go to a public place and ask randomly.

* A company is hired to find out who Canadians think will win the next Grey Cup. To collect the data, the company puts an advertisement in the sports section of all major newspapers asking people to vote for their choice.